

realize the
nd of train-
danger of
edge before
g of a few
her science
development
nowledge of
e. We are
ly to view,

aminations
tion during
important
ne scientific
inary and
o not lend
e examiner,
aching, the
ation. The
get pupils
subjects in
sideration.
acher; it is
success is
These are
posed to be
can not or
set have to
ations of a
to be hoped
aminations
educational

influence,
se for the
es into our
of properly-
implied,
use. It is
e teaching
n, that for
isiasm; the
e direction
er.

that nature
he teacher
edge of the
blic school
e qualifica-
o room for
o scientific
nowledge of
e rest have
of methods
is of very
posed that
e for this.
d of them,
that if pos-
For some
come quali-
whatever in
five years,
er. During
one in
eing taken
atter, after
d from the
nd or third
ose to take
haps about
g thus ob-
altogether
jects from
g the best
g the most
little use.
and as the
continued to a
it is prac-
onthis only.
e student's
usefulness
ad formed
his course.
ate. Think
English or
only one or
se branches
ark to say
cent years
necessary to
o have tak-
g with the
s, the only
cient work
e those in
ke matters
of studies
course for
cept in so
part of the
ene made.
ning of our
l training
osed that if
quirements
school work
eence being
certificates,
e made to
dcl schools,
do for the
heir future
of the ac-

knowledge needs of the public schools, and of the supposed desire to introduce into the rural schools, at least, some form of nature study that will be of use to children whose future is to be spent on the farm. We find, however, the same neglect of these important subjects. In the model schools, teachers in training are instructed and examined in methods of teaching English, mathematics, history, geography, etc., but the science subjects are not considered of sufficient importance to receive more than a passing notice. The condition of affairs in the Normal schools is not much better.

From all this it is evident that before agricultural or kindred science subjects can be successfully taught in the public schools, the very first thing necessary is a body of trained teachers. Steps should be taken at once to insure the proper training of teachers who may in future enter the field. As thorough a training should be required in the science subjects as in English and mathematics. No one should in future be given a license to teach, at least in a rural school, whose knowledge of the science subjects is less than what has been in the past required from those who have taken that option for second-class certificates, and that standing should be gradually raised till it equals what has been required for first-class. That is not more than is necessary for those who are going to attempt to teach science, and every teacher of a rural school should be required to do so.

The disciplinary training received by the teacher from such a course would be of the highest class, and it would enable him to impart to his pupils a training which, in addition to the mental development resulting from it, would furnish a basis for a knowledge of their future occupation, and go far to make their life-work both pleasant and profitable. As to professional training, there is no reason why the Model schools should not give some attention to methods in science as well as in other departments; indeed, there are abundant reasons why they should do so. In some countries where agriculture is taught in the primary schools, notably in France, where it is well and extensively taught, there are Agricultural Normal schools. In these teachers are trained with a view to their filling positions in agricultural districts. Why could not we take a leaf from their book? We are accustomed to boast of our progressive ideas and to pat ourselves on the back for being so far ahead of other people. If this be our condition, how is it that nothing effectual has been done to promote the teaching of agricultural sciences in the schools of Ontario? A new Normal school is just now beginning its career at London, but it seems to be on just the same lines as the old ones, so far, at least, as any public announcement indicates. Might not some of our progressiveness be shown there? The time is opportune.

Does someone ask what is to be done with the teachers already in the schools? Opportunity should be made for them to fit themselves for this work by establishing summer schools at which they may get started in the right direction, by making provision for a series of addresses at Teachers' Institutes along the same lines. The most common-sense thing the writer ever heard on this subject was a series of addresses given in the spring of 1897, before the Elgin Teachers' Institute, by the late Prof. Pantou. If the work were made obligatory, the people were desirous of having it done, and new teachers looking for positions were qualified to do it, those already in the schools and expecting to continue teaching would soon qualify themselves for the work, if reasonable means of doing so were placed within their reach.

These are some of the things that should be, but as yet are not. That there is a consciousness on the part of those in authority that they should be, is shown by the attempts in the way of regulations to bring about a better state of affairs. The change for the better will come just as soon as the farmers are earnest in their demand for it. Those in authority are quite alive to the importance of doing everything they can to promote both the interests of agriculture and of education, and as soon as those who are most directly interested—the farmers and their families—show that they fully appreciate the advantages offered them, that they are prepared for and desire the introduction of real effective nature study into the rural schools, and not the mere pretense at it that we now have, so soon will the obstacles be removed and steps taken to provide for them teachers with the necessary scientific training. So long as the people are satisfied with a stone, is it likely they will be given bread? When they demand bread, and mean it, they will get it.

Sheep and Dogs.

I think a more stringent law in regard to dogs could and should be passed.

If municipal councils would pass by-laws for paying sheep owners full value for all sheep killed by dogs, and part value for all worried, and levy a rate of so much per dog to pay all damages, it would help to rid the country of a lot of worthless dogs and encourage people to keep more sheep. In this way parties who own two or three dogs and pay no municipal tax would have to help pay for all sheep killed by canines. Also, the law should require all dog owners to put a tag on their dogs (which should be renewed each year) and make it lawful for any person to kill a dog found on his premises without a tag on.

W. J. W.
Victoria Co. Ont.

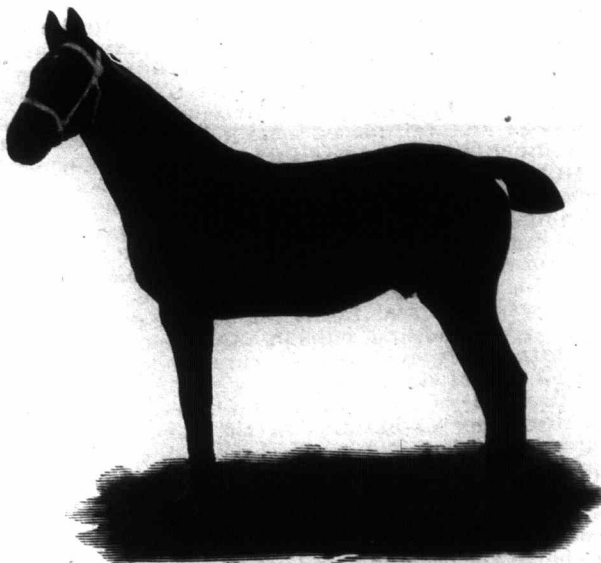
Discriminating Appreciation.

The following appreciative note from Mr. Frank Lawson, himself a son of the soil, now a member of the well-known London business firm of Lawson & Jones, speaks for itself:—"I thank you for the copy of your magnificent Christmas number, and have examined its contents with considerable interest. The marvel of what modern journalism can supply prepares one for almost anything in the wealth of illustration and unlimited resources of literary skill for such a small amount from the subscriber. I might say that your enormous circulation does not surprise me either. I only wonder that any person who is engaged in farming or stock-raising in this country should feel he can afford to be without the FARMER'S ADVOCATE. Just to think that an individual farmer only expends one dollar a year to get the benefit of the thousands of dollars that your company lay out in procuring information of all that is currently transpiring for his service and interest! To add to this, you furnish good value for the subscription price in household literature, direct from the pens of such authors as Jean Blewett, Robert Elliott, Agnes Burns Spencer, and other contributors of the highest standard, leaves no excuse for any farm home being without your magazine."

STOCK.

Shams of the Shows.

To the Editor FARMER'S ADVOCATE:
SIR,—So much that is good, instructive and practically useful appears in the FARMER'S ADVOCATE that criticism or fault-finding seems like ingratitude. Still, when reading your just condemnation of the disastrous tricks with the milk cows at the Toronto show, I could not help thinking it a rather one-sided proceeding to visit the shortcomings of one set of exhibitors with severe censure,



YEARLING HACKNEY STALLION.

First prize, Canada Central Exhibition, Ottawa, 1899.
OWNED AND EXHIBITED BY HON. M. H. COCHRANE,
HILLHURST, QUE.

when by their own act they had got a severe dose of punishment, while allowing to pass without remark practices quite as deceptive, and in some ways as objectionable, as tampering with the milk-cows' udder.

The Ayrshire cow is an animal endowed by nature, assisted by the intelligent skill of her Scotch breeder, with an ample covering of soft, mossy hair, and a strong pair of horns, which do not always grow in accordance with any fashion.

Yet we find these cows exhibited at the shows with their coats closely barbered, so that the visitor, who is intent on learning the true character and appearance of the Ayrshire, goes home with the impression that she has a short, bristly coat, which makes her a tender, shivering creature, fit only for a hothouse. He is in blissful ignorance that much skill and patience with a patent pair of clippers has given her that dandified, naked look, nor is he informed that those upright horns, with the beautiful outward twist at the top, has been produced by the same sort of misguided swaddling as that which the feet of the Chinese beauty receive.

Then, the visitor to the sheep pens finds the Shropshire and Oxford Down sheep sporting fleeces which gives them the appearance of coarse and enlarged Southdowns. What is gained by this absurd practice is difficult to understand. One great value these breeds possess over their tidy little rivals is their greater wool-growing propensity, which character is lost if the showyard specimens are taken to represent their performance.

These shows not only deceive the visiting public, but they influence the judges even in spite of their better understanding, for the skill with which the work of show preparation is done is to a great extent taken as a proof of the standing and experience of the exhibitor, and the skillful shearer is able to hide the slack points in his sheep, so that the spectators, who do not get a chance to handle, rule, to some extent, the judge who wishes his decision to be popular.

Now, is it needful or proper that the outward

character of these breeds should be modeled for the showyard in a different mould, form or covering to that which they display when quietly browsing in their home pastures? FARMER.
Prince Edward Island.

Wintering Idle Farm Horses.

WHEAT STRAW AND BOILED FEED.

To the Editor FARMER'S ADVOCATE:

I don't know that I can tell your readers anything out of the common in respect to wintering idle horses. I would recommend turning horses out in the day time after the fall work is done, and bring them in every evening; as the weather gets colder and winter sets in I would bring them in earlier. Horses should not be left standing round buildings, but be taken in out of the cold as soon as ever they have finished feeding outside and come up to the stable themselves. I only water my work horses, which are running out once a day, and always give them free access to salt in a trough outside, which is most important, especially in winter when horses are getting wheat straw, which forms the bulk of the feed for horses in this district at any rate. I feed my idle horse about a half gallon of oats and a half gallon of bran twice a day. As the weather gets colder I boil barley in a galvanized steel boiler which holds 50 gallons. One boiler full every other day, after being mixed with bran, is sufficient for two evenings for fourteen horses. Bran should always be mixed while the barley is hot, which scalds the bran and makes it much better feed when the bulk of the ration is wheat straw. The galvanized, flat-bottomed feed furnaces are a great improvement on the old iron feed boilers, especially where wood is scarce, as they only require about half the fuel. A good many farmers would not take the trouble to boil feed for idle horses, but let them feed, say, half their horses on boiled feed once a day and the other half on dry oats, and see which will be in the best condition by spring, and take the least feed to put them into condition for spring work. I'll guarantee they will have healthier and better-conditioned horses by boiling feed, and will be repaid for the extra trouble many times over. I never have any trouble in keeping horses in condition on wheat straw and free from every kind of sickness. On rough days during winter I always let horses come in the stable again after watering in the morning, and give them grain at noon. It is also most important that the stables be properly ventilated. This is a thing which is very much neglected in this country; in fact, it's surprising there is not more sickness among horses, when they are fastened up every night in stables with low ceilings, without any ventilation of any kind.

A good many farmers prefer cut oat sheaves for winter feed, but every farmer does not possess a windmill, or the necessary power for cutting sheaves for a lot of horses. I consider horses can be wintered much cheaper and quite as satisfactorily on wheat straw, with oats, bran and boiled feed every evening. By turning idle horses out during the day they get exercise, and if a person has a piece of rough prairie anywhere handy they always get some grass, which is a great help to them in cases where all the land is under cultivation, like on the majority of farms round here. Every farmer ought to have a good big straw stack handy, where horses could go and feed on the sheltered side of the stack on a cold day. So far as my experience goes I find Western horses much easier wintered than eastern horses; they appear to enjoy feeding on the prairie, and paw snow much better than eastern horses. I would buy our own Western or ranch horses in preference to an eastern horse every time. I have only two or three eastern horses, and have generally to bring them in earlier, especially on a cold day, than the Western horses, as they appear to feel the cold more. The trouble with the Western horse is to get them heavy enough for our heavy land. I prefer horses weighing about thirty hundred per team. At present I have three or four Western teams which weigh from 3,000 to 3,350 pounds.

On toward the middle of March I always decrease boiled feed and increase the allowance of oats, according to the condition of each team, to harden them and put them into condition for spring work. Horses should be given some work before seeding to get their shoulders hardened up before going into heavy work, and care taken, especially the first few days of seeding, to keep their shoulders from getting scalded; salt and water can be used to advantage to harden the shoulders. Round this district, where we stick to wheat growing and practically have all our land, with the exception of a small pasture, under cultivation, it is impossible to breed our own horses. Rearing good horses in this country must be a very profitable business to any person not quite so favorably situated as we are in the heavy land round Indian Head district.

There are imported some hundreds of horses from Eastern Canada and United States every spring into Indian Head, and this demand for horses is likely to last for years. It seems a pity we could not breed horses in the west to supply the demand, instead of sending our money to eastern Canada and United States, and paying the C. P. R. a heavy freight on them. Good, fair eastern work horses, weighing, say thirty hundred per pair, could not be bought in Indian Head last spring under \$300 per team, and were as high as \$350 per team. With all the thousands of acres of land lying idle in this country, surely we should be able to breed our own horses.

ALFRED E. WILSON.